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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,277	12/27/2000	Jae-Lag Ma	8733.363.00	4729
30827 7590 05/02/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER RUDE, TIMOTHY L	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 05/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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# Office Action Summary

Application No.

09/748,277

Applicant(s)

MA ET AL.

Examiner

Timothy L. Rude

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claims and Claim Objections*

1. No claims are amended subsequent to the Non-Final Rejection mailed 22 September 2006.

Claim 6 is objected to because of the following informalities: Limitations as to the “light shielding film is formed at the same layer level as the lower polarizer” is considered to read on species that are not disclosed in Applicant’s specification and may be considered to fail to distinctly claim Applicant’s invention. Applicant discloses only species wherein the light shielding film is coated or printed onto the lower polarizer [arguably a discrete adjacent layer] as opposed to being extended beyond the edge of the polarizer in the same layer level or commingled into the polarizer on the same layer level [Summary para 3 and Detailed Description para 4 on page 7, lines 7-10].

For examination purposes, a layer coated or printed onto the polarizer will be considered to read on Applicant’s “formed at the same layer level” per Applicant’s enabling disclosure.

Appropriate correction is required.

Claim 13 is objected to because of the following informalities: Limitations as to the “light shielding material formed in the lower polarizer” is considered to read on species that are not disclosed in Applicant’s specification and may be considered to fail to distinctly claim Applicant’s invention. Applicant discloses only species wherein the light shielding film is coated or printed onto the lower polarizer [arguably a discrete

adjacent layer] as opposed to being formed into and extended beyond the edge of the polarizer in the same layer level or commingled into the polarizer on the same layer level [Summary para 3 and Detailed Description 4 on page 7, lines 7-10].

For examination purposes, coated or printed directly onto the polarizer will be considered to read on Applicant's "formed in the lower polarizer" per Applicant's enabling disclosure, and because coating or printing will result in some diffusion into the surface of the lower polarizer.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

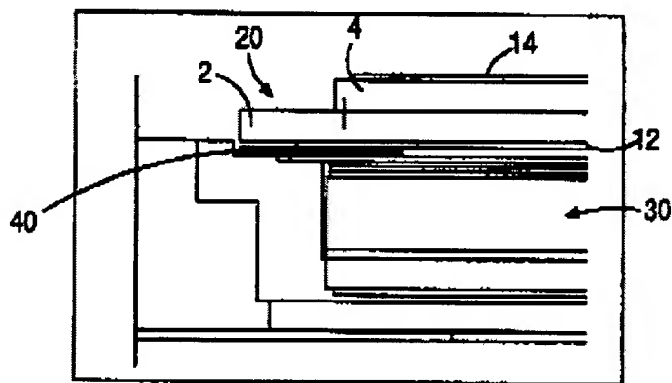
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (APA) in view of Dingwall et al (Dingwall) USPAT 5,307,188.

As to claims 6 and 9-13, APA discloses in Figures 1-4 (Specification pages 2-4), a dot matrix (Specification, Page 2, lines 18-22) liquid crystal display (LCD) device, comprising:

Fig. 1

(Conventional Art)



an upper polarizer, 14; on an upper substrate, 4, having a color filter (not shown, specification, page 3, first para);  
a lower substrate, 2, on a lower polarizer, 12;

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a liquid crystal layer (not shown) disposed between the upper substrate and the lower substrate; and

a backlight device, 30, disposed opposite and adjacent to the lower polarizer for emitting light toward the lower polarizer (Figure 1) (please note that adjacent does not preclude structures between those items considered to be adjacent, e.g., two houses may be adjacent despite the existence of an intervening garage);

wherein at least a black pad, 40, that acts as a light shield (Applicant's light shielding layer) formed in a rectangular shape having a substantially centrally located rectangular opening resulting in light shielding layer substantially shielding exclusively the peripheral portion (evident from Specification, Page 3, lines 11-14) of the lower polarizer to permit light to pass through the rectangular opening; wherein the light shielding layer only blocks a portion of the light traveling to four peripheral sides of the lower polarizer for minimizing constructive interference at a peripheral portion of the LCD device; and wherein the light shielding film absorbs light (inherent property of the color black).

Please note that some of Applicant's newly added limitations are intended use in nature, wherein each intended use does not substantially further limiting the device claim and as such is considered met by the applied prior art.

APA does not explicitly disclose a lower polarizer that includes said light shielding film.

Dingwall teaches in Figures 2 and 3 (col. 5, lines 33-40 and col. 7, line 60 through col. 8 line 28), a liquid crystal display (LCD) device, comprising: a lower substrate, 236b, on a lower polarizer, 237b, that includes a printed on opaque black

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mask, 235 [Applicant's light shielding film formed at the same layer level as the lower polarizer and formed in the lower polarizer (diffusion)], to provide greater flexibility by first printing the black mask to define the image elements (or viewing area) with minimal alignment concerns to eliminate light leaks and allow the use of a true black mask rather than a gray mask to provide a true dead front (col. 5, lines 33-46).

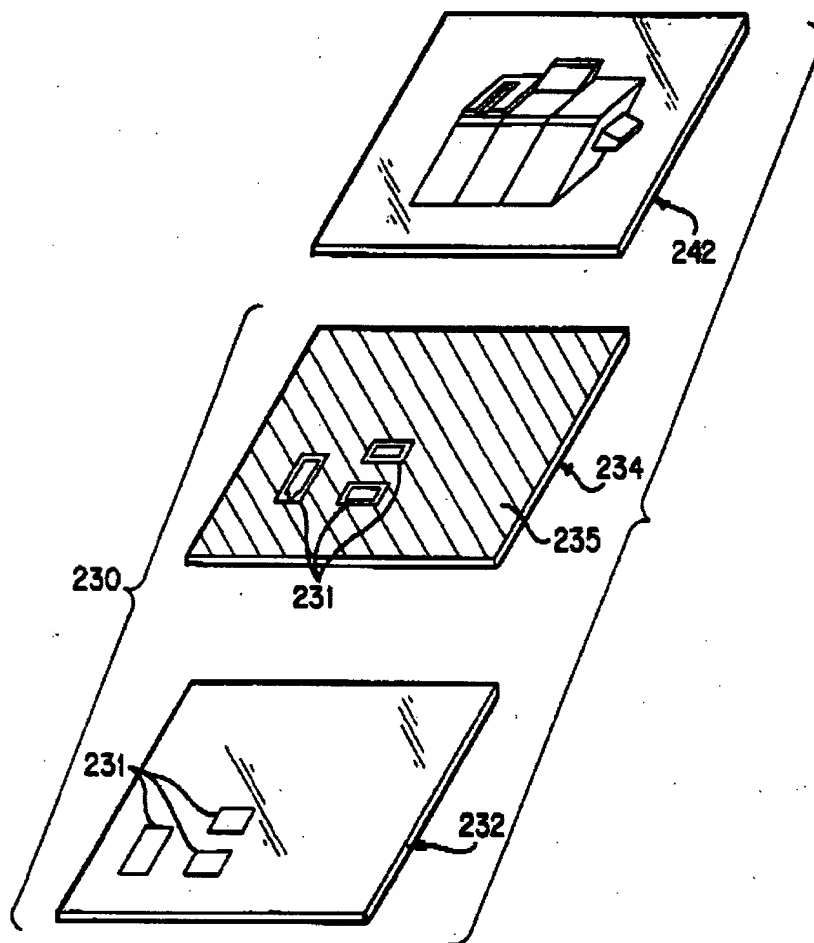


FIG. 3

Dingwall is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a lower polarizer that includes an opaque black mask (Applicant's light shielding film) to provide greater flexibility by first printing the black mask to define the image elements (or viewing area) with minimal alignment concerns to eliminate light leaks and allow the use of a true black mask rather than a gray mask to provide a true dead front.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with a lower polarizer that includes a light shielding film of Dingwall to provide greater flexibility by first printing the black mask to define the viewing area with minimal alignment concerns to eliminate light leaks and allow the use of a true black mask rather than a gray mask to provide a true dead front.

Please note: Applicant's limitations "to minimize constructive interference at a peripheral portion of the LCD device" are considered intended use and/or performance recitations considered met by the structure rejected above according to Applicant's own enabling disclosure.

As to claims 7 and 8, Dingwall, as combined above, teaches (col. 8, lines 11-28) a liquid crystal display (LCD) device of claim 1, wherein the at least one opaque surround or black mask, 235, (Applicant's light shielding layer) is formed by a photographic process, by offset lithography (Applicant's coating), or by screen printing



(Applicant's printed material) black mask materials that absorb the light (col. 8, lines 29-33, and col. 13, lines 25 and 26).

### ***Response to Arguments***

3. Applicant's arguments filed on 05 January 2007 have been fully considered but they are not persuasive.

#### **Applicant's ONLY substantive arguments are as follows:**

(1) Regarding base claims 6 and 13, are objected to because they are not distinctively claimed.

(2) Regarding base claims 6 and 13, applied prior art does not teach the claimed "light shielding film is formed at the same layer level as the lower polarizer" and "formed in the lower polarizer".

(3) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

#### **Examiner's responses to Applicant's ONLY arguments are as follows:**

(1) It is respectfully pointed out that the limitations added to claims 13 and 6 in the responses filed 07 December 2005 and 30 May 2006 are considered to lack sufficient support in the original disclosure. Drawings are often approximate, especially for thin layers in edge-on view.

Limitations as to the “light shielding film is formed at the same layer level as the lower polarizer” and “formed in the lower polarizer” are considered to read on species that are not disclosed in Applicant's specification and may be considered to fail to distinctly claim Applicant's invention. Applicant discloses only species wherein the light shielding film is coated or printed onto the lower polarizer [arguably a discrete adjacent layer] as opposed to being extended beyond the edge of the polarizer in the same layer level or commingled into the polarizer on the same layer level [Summary para 3 and Detailed Description para 4 on page 7, lines 7-10].

For examination purposes, a layer coated or printed onto the polarizer is/was considered to read on Applicant's “formed at the same layer level” and “formed in the lower polarizer” per Applicant's enabling disclosure which states:

“The light shielding film 15 is formed by coating or printing a light absorbing material on the lower polarizer. Moreover, the light shielding film 15 beneficially has a black color.”

Given this is, in fact, Applicant's enablement for a light shielding layer in/on a polarizer, the only conclusions one can reasonably draw are that the light shielding layer is a coating or printing on the polarizer. However, there *might* be a non-zero amount of diffusion of the coating or printing into the polarizer, but that still would likely be insufficient to serve as an effective light shielding layer. Examiner considers the applied prior art to meet all claim limitations that have adequate support in the original disclosure. Even if Applicant is relying on diffusion to result in a light shielding layer “formed at the same layer level” and/or “formed in the lower polarizer”, Applicant has not

provided any disclosure as to there being any diffusion, let alone a minimum required amount of diffusion. Therefore, the applied prior art meets these undisclosed and unclaimed features of diffusion.

(2) It is respectfully pointed out that Dingwall was applied to teach an opaque black mask printed on a polarizer with motivation to combine per rejections above [matches Applicant's disclosed and claimed structure per Applicant's enabling disclosure]. Examiner considers Dingwall to be highly relevant and applicable prior art with a clearly stated motivation of providing a true dead front [Applicant's minimize constructive interference at a peripheral portion of the LCD device]. Examiner considers the applied prior art to meet all claim limitations that have adequate support in the original disclosure. Even if Applicant is relying on diffusion to result in a light shielding layer "formed at the same layer level" and/or "formed in the lower polarizer", Applicant has not provided any disclosure as to there being any diffusion, let alone a minimum required amount of diffusion. Therefore, the printed light shielding layer of the applied prior art meets these undisclosed and unclaimed features of diffusion.

(3) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy L Rude  
Examiner  
Art Unit 2871

tlr



David Nelms  
Supervisory Patent Examiner  
Technology Center 2800